

Docket No.: 63979-032

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of

Yoshiaki HASEGAWA, et al.

Serial No.: 10/643,944

Filed: August 20, 2003



Customer Number: 20277

Confirmation Number:

Group Art Unit:

Examiner:

For: SEMICONDUCTOR LASER AND PROCESS FOR MANUFACTURING THE SAME

**INFORMATION DISCLOSURE STATEMENT**

Mail-Stop IDS  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In accordance with the provisions of 37 C.F.R. 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached form PTO-1449. It is respectfully requested that the references be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is being filed within three months of the U.S. filing date OR before the mailing date of a first Office Action on the merits. No certification or fee is required.

Each non-English language reference was first cited in a corresponding foreign application search report or office action and its relevance discussed therein. A copy of the


10/643,944

foreign search report or office action, together with an English language version thereof, is attached for the Examiner's information.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

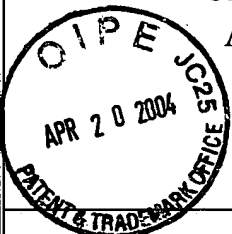
Respectfully submitted,

MCDERMOTT, WILL & EMERY



Michael E. Fogarty  
Registration No. 36,139

600 13<sup>th</sup> Street, N.W.  
Washington, DC 20005-3096  
(202) 756-8000 MEF:gav  
Facsimile: (202) 756-8087  
**Date: April 20, 2004**

<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b>   (PTO-1449)				ATTY. DOCKET NO. <b>63979-032</b>		SERIAL NO. <b>10/643,944</b>	
				APPLICANT <b>Yoshiaki HASEGAWA, et al.</b>			
				FILING DATE <b>August 20, 2003</b>		GROUP	
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code2 (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document		Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
		US 5,345,463	09/06/1994	Mannoh et al.			
		US					
		US					
		US					
		US					
<b>FOREIGN PATENT DOCUMENTS</b>							
EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes -Number 4 -Kind Codes (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No
		JP 10-200214 A	07/31/1998	NEC CORP			x
		JP 6-283825 A	10/07/1994	TOYODA GOSEI CO., LTD.			x
		JP 4-275479 A	10/01/1992	NEC CORP.			X
		JP 2000-21789	01/21/2000	TOSHIBA CORP.			X
		JP 5-291686	11/05/1993	-			X
		JP 11-251687	09/17/1999	-			X
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.					
		GOTO, S., et al. "InGaN: Improvement of quantum efficiency by InGaN interlayer for blue-violet laser diodes." Sony Shiroishi Semiconductor Inc. 28p-E-12, Page 369					
		NAKAMURA, Shuji. "InGaN Multi-quantum-Well-Structure Laser Diodes with GaN-AlGaIn Modulation -Doped Strained-Layer Superlattices." IEEE Journal of Selected Topics in Quantum Electronics, Vol. 4, No.3, May/June 1998, pp. 483-489					
		KNEISSL, Michael., et al. "Performance and degradation of continuous-wave InGaN multiple-quantum-well laser diodes on epitaxially laterally overgrown GaN substrates." Applied Physics Letters, Volume 77, Number 13, September 25, 2000, pp. 1931-1933					
		NAKAMURA, Shuji., et al. "UV/Blue/Green InGaN-Based LEDs and Laser Diodes Grown on Epitaxially Laterally Overgrown GaN." IEICE Trans. Electron., Vol E83-C, No. 4, April 2000, pp. 529-535					
		TOJYO, Tsuyoshi., et al. "GaN-Based High Power Blue-Violet Laser Diodes." The Japan Society for Applied Physics, Volume 40, Part 1. No. 5A, May 2001, pp.3206-3210					
		KURODA, Naotaka., et al. "Precise control of pn-junction profiles for GaN-based LD structures using GaN substrates with low dislocation densities." Journal of Crystal Growth 189/190 (1998) pp. 551-555					
		OHBA, Y., et al" A study on strong memory effects for Mg doping GaN metalorganic chemical vapor deposition." Journal of Crystal growth 145 (1994) pp. 214-218					
		BLAAUW, C., et al. "Secondary ion mass spectrometry and electrical characterization of Zn diffusion in n-type InP." J. Appl. Phys. 66(2), July 15, 1989, American Institute of Physics, pp. 605610					
EXAMINER				DATE CONSIDERED			

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.